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Educating At-Risk Urban African American Children:  
A Comparison of Two Types of Middle Schools

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Evidence is clear that urban high poverty public schools are failing to meet the educational needs of its students, particularly students of color. The present study examines the effectiveness of two types of high poverty parochial schools for 354 African American middle school students. Results show that alternative middle schools, known as Nativity schools, are more successful than traditional schools in helping students improve in standardized test scores. Further analyses show that, regardless of school type, students perform better in school when their levels of intrinsic motivation for school work is higher. Intrinsic motivation is influenced by students' self-worth perceptions and perceptions of their class environments as engaging and their schools as enjoyable and fair places. Implications for urban schooling for African American children are discussed.

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Two related themes that dominate the literature on urban middle schools are, first, that these schools have failed to adequately educate their children (e.g., Noguera, 2003) and, second, that children of color consistently lag behind majority white children in measures of academic performance (National Center for Educational Statistics, NCES, 2004a, 2004b; Olsen & Jerald, 1998). Other research (Gardner, 2001; Green & Forster, 2004; Hale, 2001) has shown that urban schools have been particularly ineffective at educating African American children. In addition, Noguera (2003) and others have cited low student achievement and attendance and unmotivated students and teachers among the problems faced by these schools and have called for reform efforts in the public and private domains.

The present study will examine the experience of urban African American children considered at-risk in two types of urban parochial middle school programs – small Nativity middle schools and more traditional parochial schools with middle school programs housed within a larger Pre-K-through-grade-8 school. In this study, students' standardized test scores, students' self-perceptions and perceptions of the climates of the two types of schools, and the predictors of student achievement are examined.

*Urban Education for African American Children*

Hale (2001) contended that the schools that most African American children attend – urban public schools – teach a watered-down curriculum that fails to provide students with the knowledge and skills needed to pass competency exams or be competitive in the workplace. She contended that African American students tend to attend secondary schools that demand so little that too few of them are able to achieve a passing grade on competency examinations

required for high school graduation (see also, Alliance for Excellent Education, 2003a). In addition, African American children and adolescents are more likely than are white students to be taught by teachers who are inexperienced and poorly prepared (Prince, 2002).

Hale (2001) suggested that the root of the problem of schools failing to meet the educational needs of African American children and adolescents lies in the inability of schools to adapt pedagogy and structures to African American culture and the kinds of challenges faced by African American families. Also, because African American children tend to be more kinesthetic than white children in their learning styles and to have a higher level of motor activity, teachers need to adapt learning activities to these characteristics and provide instruction that is “variable, vigorous, and captivating” (p. 117). Since, as she contends, African American children, especially boys, often are not intrinsically interested in school, largely because the curriculum rarely provides a good fit for their learning styles and cultural backgrounds, they tend to disconnect intellectually by fifth grade and drift along until they can legally drop out at age 16.

Despite the ills of urban public schooling and the risks faced by students who live with social and economic disadvantage, several recent efforts have shown that children and adolescents of color who attend some urban public and private schools, including schools with high concentrations of low income students, can and do experience educational success. As some studies (Swaminathan, 2004; Towns, Cole-Henderson, & Serpell, 2001; Waxman, Huang, & Anderson, 1997) have shown, elements that support success for at-risk students of color include a supportive and caring environment that facilitates the students’ ability to learn and perform at a high level. In particular, research by Towns et al. (2001) showed that effective urban schools possessed common factors, such as strong administrative leadership, high

expectations for achievement, careful monitoring of student progress, discipline and order, and an emphasis on skills, homework, teamwork, and parental involvement. Effective principals encourage their faculty and maintain positive personal relationships with students. In addition, teachers in these effective urban schools communicate high expectations for themselves and their students and create a high energy classroom climate. These characteristics are consistent with the research literature (e.g., Lewis, 2000; Lipsitz, 1984) on effective middle schools.

Similarly, research by Waxman et al. (1997) found that students in effective urban schools reported more positive learning environments, perceived their teachers as more supportive, and reported more order and organization in their classrooms than did students in ineffective urban schools. In addition, Trimble (2004) addressed the importance of middle school teachers setting high academic standards, providing students with the assistance they need to achieve, and promoting student engagement in the learning process.

### *Nativity Schools*

The first Nativity model middle school opened in New York City over 30 years ago to provide area economically disadvantaged Hispanic boys with an educational program that would improve their academic skills and prepare them for a successful high school experience (Podsiadlo & Philliber, 2003). The more than 40 such schools in operation today throughout the U.S. have sought to provide inner city, economically disadvantaged youth with the kind of educational program, free or nearly free of charge, that is typically available only to the children of the wealthy. The model incorporates many of the characteristics of effective middle schools, beginning with a competent instructional leader and a dedicated and talented teaching staff. Among the other characteristics are small classes for instruction, small advisory groups, close monitoring of student progress, involvement of parents, holding students and teachers to

high standards of performance and conduct, and providing a developmentally-appropriate academic program that challenges students. In addition, Nativity model schools continue to monitor and support their graduates throughout their high school years and help guide them and their families with the college application process.

#### *Predictors of Student Academic Success*

Recently, several researchers (Powell & Jacob Arriola, 2003; Wenglinsky, 2004) have called for a more attention to examining psychosocial factors related to student self-perceptions and school environmental characteristics as predictors of academic performance of minority students. Powell and Jacob Arriola suggested that academic achievement was related to student motivation, positive self-regard, and a sense of internal control, particularly among African American and Hispanic students, although other research (Finn & Rock, 1997) has shown that such self-perceptions are not related to academic success for at-risk minority students. With respect to classroom factors, Wenglinsky (2004) showed that African American students benefited from more time on task.

The present study, then, examines the differences in student academic performance, self-perceptions, and perceptions of the school and classroom learning and social environments of African American middle school students in two types of urban private, parochial schools where over 90 percent of students qualify for federal free or reduced lunch. In addition, predictors of academic performance will be examined.

#### Method

##### *Schools and Student Participants*

Schools selected for the present study include six Nativity model schools in which the population of African American students was at least 30%. Six of nine Nativity schools

involved in a larger study met this stipulation and enrolled a total of 223 African American or black children, including 151 boys and 72 girls, in grades six through eight. Among the six schools, located in Baltimore (2 schools), Boston (2 schools), New Orleans, and Washington, DC, were three schools that educated boys only (N=116), two that were coeducational (35 boys and 38 girls), and one that educated only girls (N=34). Four of the schools enrolled fifth graders who were not included in the present study. Student-teacher ratios in Nativity schools averaged 5.6 to 1, the median class size for instruction was 12, and students attended school for a mean of 10 hours per day. The mean age of the Nativity school students was 12.2 years (SD=1.0). Ninety-four percent of the students qualified for federal free or reduced lunch.

Comparison schools, which housed middle school programs within a larger Pre-K through grade 8 coeducational structure, located in Baltimore, enrolled 68 boys and 87 girls in grades six through 8 who were self-identified as African American or black. The student-teacher ratio for the comparison schools was 20.7 to 1, the median class size for instruction was 22, and students attended school a mean of 7 hours per day. The mean age of the students was 12.6 years (SD=1.0) and 90% qualified for federal free or reduced lunch.

### *Materials*

Surveys were provided to each of the six Nativity schools and two comparison schools for administration to students that assessed students' self-perceptions and perceptions of the school climate. With respect to self-perceptions, students indicated the extent to which they disagreed or agreed on a 4-point scale with items that addressed levels of self-esteem (6 items, alpha=.76; based on Harter's [1985] Self-Perception Profile for Children), and intrinsic motivation, or tendency to persist even when tasks are difficult (7 items, alpha=.80; based on Harter's [1981] Scale of Intrinsic versus Extrinsic Orientation in the Classroom). Students also

reported on a 5-point scale (from *Never*, coded 0, to *About once a week*, coded 2, to *Everyday*, Coded 4) the extent to which they had trouble since the start of the school year getting along with teachers and students, paying attention, following rules, and getting homework done (School Adjustment Difficulty; 5 items, alpha = .90).

Scores on five subscales that assessed students' perceptions of various aspects of the school and classroom climate were also compared in the present study. Items for the subscales were taken from the Classroom Environment Scale (Moos & Tricket, 1987) and the Talent Development Student Survey developed by the Center for the Social Organization of Schools (2003). These subscales included measures of students' perceptions of the care and support provided by the principal at the school (3 items, alpha = .71), the extent to which students get along and make friends (Peer Social Climate, 4 items, alpha=.68), the climate of the school as enjoyable and its rules fair (5 items, alpha = .78), and the climate of their math class and language arts class as being academically engaging, task oriented, and supportive (12 items each; Math alpha = .78; Language Arts alpha = .83). For each of the items in the five scales, students selected a response on a four-point scale (scored 1 through 4) indicating the extent to which they disagreed or agreed with a particular statement.

Information was also collected from an administrator at four of the six Nativity schools (two coed, one boys, and one girls) and both comparison schools on students' academic progress (academic grades in three core subjects and standardized test scores). One form was completed for each student in grades 6 through 8 that provided academic and attendance data for each year at the school. Standardized test scores in reading and mathematics and students' previous school year's mean report card grades in math, language arts, and science (on a scale of 0 through 100) for members of the classes of 2004 and 2005 are used in this study. Two of

the Nativity and both of the comparison schools used the Iowa Test of Basic Skills and the remaining schools used the Stanford 9. Tests were administered at three of the Nativity schools in March or April and in October at the other schools. For each student, two variables were created to code whether (1) or not (0) he or she improved one grade equivalent (GE) or more in reading and math per year of attendance at the school. This approach to examining gains in standardized test performance is consistent with that of other research (Balfanz & Byrnes, 2002). Similarly, two additional variables indicating whether the student was performing at or above grade level (coded 1) or below grade level (coded 0) for the time of year when the test was administered. Because the study was conducted in the fall of the year, standardized test scores were not available for the current school year. Also collected from the school administrators was information on structural aspects of the schools, such as the length of the school day, the presence of after-school and tutorial programs, student-teacher ratios, the certification status and experience levels of teachers, admissions processes, and the administrative structure of the school.

### Results

Nativity model middle schools and middle school programs in traditional Pre-K-Grade-8 urban parochial schools were compared with respect to students' self-perceptions, perceptions of aspects of the school and classroom learning and social environments, and grade point averages using a series of independent *t* tests (See Table 1). Results showed four significant differences favoring Nativity schools and one favoring traditional middle school programs. Nativity school students perceived their schools as more enjoyable for them with rules that were more fair, as providing a more peer-friendly environment, and as having math classes that were more engaging and respectful learning environment. They also viewed their parents as

more involved in their schools. On the other hand, traditional parochial school students viewed their principals as more caring and supportive.

To examine whether students in either type of school experienced greater academic success and to explore which of the factors related to student perceptions further explained variations in students' academic performance, multiple regression analyses were conducted using students' report card grades (Table 2) and students' gains in their performance on standardized test scores in math and reading (Table 3) as criterion variables. With respect to students' grades, considering that schools are likely to vary with respect to the processes of assigning grades, the school's gender structure accounted for significant variation, controlling for school type and student sex, with students in coeducational schools earning higher grades. With respect to student perceptions, the extent to which students reported fewer difficulties with teachers and peers at school and the higher their levels of intrinsic motivation for school work, the higher their grades. No other factors explained significant variation in grades.

In examining factors that predicted student performance and performance gains on standardized tests, differences between Nativity and comparison scores were examined first using a series of Chi-square analyses. These results showed significantly greater gains for Nativity students as compared to students in the comparison schools in both reading,  $\chi^2$  (df=1) = 23.20,  $p < .001$ , and math,  $\chi^2$  (df=1) = 25.15,  $p < .001$ . In addition, a greater percentage of Nativity students were performing at or above grade level during the 7<sup>th</sup>-grade administration of the tests in both reading (58.8% vs. 26.4%),  $\chi^2$  (df=1) = 12.50,  $p = .001$ , and math (56.8% vs. 23.6%),  $\chi^2$  (df=1) = 6.67,  $p = .010$  (see Table 3). In multivariate analyses of predictors of test score gains, school type, school gender structure, and student sex were entered in the first three steps of binary logistic regression analyses. Results showed, first, that a significantly higher

percentage of Nativity students showed this level of gain in both math (67.7% vs. 49.5%) and reading (65.6% vs. 40.4%) compared to comparison school students (see Table 3). In addition, the extent to which students viewed their school environment as enjoyable with rules that are fair accounted for additional significant variation in math score gains only.

### Discussion

In order to contribute to the research on factors that are related to academic success for urban African American middle school students, considered at risk because of their family's material poverty and their lack of access to high quality public elementary schools, students attending eight different urban schools, representing two models of private school education, were administered questionnaires examining their self-perceptions and perceptions of their school environments. Also, data on students' academic performance were collected. Six of the schools were independent middle schools that have adopted the Nativity model and two schools were more traditional urban parochial schools.

Results of independent *t* tests showed that students in the Nativity schools perceived their schools as more enjoyable with rules that were more fair and as providing a friendlier peer environment when compared to the perceptions of the comparison school students. They also perceived their math classes as providing a more engaging and respectful learning environment and viewed their parents as more involved in their schools. On the other hand, comparison school students rated their administrators as more caring and supportive.

Several analyses were then conducted to examine which, if any, of these climate perceptions and self-perceptions, along with the type of school students attended, were related to academic performance. First, with respect to standardized test scores, Nativity students showed significantly greater gains than did comparison school students in both reading and

math. In addition, a greater percentage of Nativity students were performing at or above grade level during the 7<sup>th</sup>-grade administration of the tests. Logistic regression analyses showed that only school type (Nativity or traditional) predicted gains in reading standardized test scores, whereas both type of school and students' perception of the school as enjoyable and its rules fair predicted the likelihood of gaining one grade equivalent or more in math.

The clear effect for type of school in predicting student standardized test performance and gains suggests the need to examine differences in the schools' structural components and student perceptions for factors that could account for this rather strong effect. Possible distinguishing factors include the smaller student-teacher ratios and class sizes at the Nativity schools as well as the extra hours Nativity students spend in learning activities during the extended school day. Consistent with other research (e.g., Wenglinsky, 2004), the amount of time that Nativity students spend in classroom instruction and homework assistance and tutoring at the end of the school day and, in some cases in the evening, is likely to contribute considerably to their superior academic gains. The practice of extending the school day is one that has become a part of the approach being used by other recent innovations in urban middle level education, including the KIPP (Knowledge is Power Program) schools (Thernstrom & Thernstrom, 2003). Such a practice provides more engaged learning time (ELT) for students. When students are placed in small instructional groups and provided one-on-one assistance with homework assignments and academic skill development, ELT is extended and the quality of the learning is enhanced. Findings from the present and other studies (Fenzel, Peyrot, & Premoshis, 1997; Finn & Rock, 1997) suggest that engaging students in learning activities longer is the secret to student academic gains. In addition, research (Balfanz & Mac Iver, 2000; Finn & Rock, 1997) has shown that smaller schools with small classes and teachers who are

supportive of students' efforts tend to do a better job than do larger schools at engaging students in learning, factors that are present in Nativity schools (see also, Fenzel & Flippen, 2006).

However, additional findings from the present study also suggest that, consistent with other research (Powell & Jacob Arriola, 2003; Waxman et al., 1997), psychosocial factors including student perceptions of the school environment as engaging and supportive and students' intrinsic motivation to persist when the academic tasks are difficult, also appear to play a role in student academic performance. According to Waxman et al., a caring and supportive interpersonal environment, in which teachers take the lead to establish within and outside of their classrooms, helps to engage urban learners. These findings suggest that providing a caring and supportive interpersonal environment should accompany the extended learning time afforded students in small urban schools in order to maximize school effectiveness and student academic gains.

Additional school-related factors, such as teacher quality, student-teacher ratios, and curriculum, that could explain the superior academic performance of students in Nativity schools should be examined in future research as well. For example, although a larger percentage of Nativity teachers in the present study were inexperienced, Americorps-type volunteers (47.2% vs. 0), more research is needed to examine the nature of the contributions of these inexperienced teachers make to student academic achievement. As research (e.g., Cochran-Smith, 2003) has shown, a staff of well-trained and dedicated teachers is an essential component of an effective middle school, although researchers have not agreed on the relative importance of various factors that determine teachers' effectiveness or which factors related to teacher quality are most responsible for student achievement gains (Wayne & Youngs, 2003).

Perhaps the volunteer teachers bring an energy and level of commitment to their teaching and tutoring of students that some more experienced teachers in larger schools do not.

With respect to limitations of the present study, the collection of academic data from the school year previous to the student completion of questionnaires makes it difficult to ascribe cause-and-effect relations between student perceptions and academic performance. In addition, the present study, despite the clear indication that students in Nativity schools demonstrate superior academic gains compared to students in good quality urban traditional parochial schools, student characteristics related to their self-selection into Nativity schools may account for some of the findings. At the same time, however, the similarity of the groups of students in the two types of schools with respect to federal lunch program qualification should lessen the concern about the equivalence of the two groups of students. Future research should address the issue of sampling, however.

Nevertheless, the present study does make a strong case for the academic benefits that Nativity model middle schools provide for urban African American children considered at risk. Characteristics of the educational model that guides Nativity schools, most notably the small class sizes and student-teacher ratios and the extended day for homework assistance and tutoring, are worthy of adoption in other schools that serve urban middle school students.

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Table 1

*Comparison of Student Self-Perception and, Perceptions of Environments of Six Nativity and Two Traditional Parochial Schools and Students' Grade Point Average (N=395)*

Student Perceptions	Nativity Schools	Comparison		
		Schools	t	d
Self-Esteem	3.41 (.47)	3.50 (.60)	-1.60	.16
Intrinsic Motivation	3.00 (.55)	3.10 (.57)	-1.65	.17
School Adjustment Difficulty	2.90 (1.14)	3.06 (1.16)	-1.38	.14
Principal Caring and Supportive	3.37 (.53)	3.61 (.57)	-4.20***	.43
Peer Social Climate	3.14 (.54)	2.95 (.54)	3.26***	.33
School is Enjoyable and Fair	3.04 (.63)	2.87 (.60)	2.72**	.28
Math Class Climate	3.11 (.45)	2.82 (.54)	5.78***	.59
Language Arts Class Climate	2.88 (.54)	2.95 (.52)	-1.33	.13
Parent Involvement	3.25 (.49)	2.96 (.56)	5.36***	.54
Grade Point Average (N=289)	82.0 (7.6)	80.9 (8.4)	1.17	.14

Two-tailed values: \*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$

Table 2

*Results of Multiple Regression Analyses of Predictors of Students' Composite GPAs (N=278)*

Predictor	r	R <sup>2</sup> Change	Beta	t
<i>Blocks 1-3 (Variables forced in)</i>				
School Type	-.06	.004	-.13	-1.96
School Gender Structure	.12	.030**	.18	2.68**
Student Sex	.03	.001	.01	.12
<i>Block 4-5 (Stepwise entry):</i>				
Adjustment Difficulties	-.27***	.064***	-.24	-4.17***
Intrinsic Motivation	.17**	.022**	.15	2.62**

\*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$

Table 3

*Results of Logistic Regression Analyses Predicting Changes in Students' Standardized Test Scores (N=229)*

**Criterion = Change in Math Standardized Test Score (Increase  $\geq 1$  GE/year)**

Predictor	B	Wald	Nagelkerke $R^2$ Change
<i>Blocks 1-3</i> (Forced entry of dichotomous predictors)			
School Type	1.164	10.65***	.075
School Gender Structure	- .700	2.10	.022
Student Sex	.242	.62	.005
<i>Block 4</i> (Stepwise entry):			
School is Enjoyable and Fair	.580	5.04*	.034

**Criterion = Change in Reading Standardized Test Score (Increase  $\geq 1$  GE/year)**

Predictor	B	Wald	Nagelkerke $R^2$ Change
<i>Blocks 1-3</i> (Forced entry of dichotomous predictors)			
School Type	.722	4.52*	.038
School Gender Structure	- .047	.01	.002
Student Sex	- .125	.03	<.001
<i>Block 4</i> (Stepwise entry): No predictors entered equation			

\*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$